

Appln No. 10/611,354
Supplemental Amendment

REMARKS/ARGUMENTS

In view of the foregoing amendment, it is believed that the application is in condition for allowance and, accordingly, reconsideration and allowance is earnestly solicited.

If any questions remain regarding the allowability of the application, Applicant would appreciate if the Examiner would advise the undersigned by telephone.

The Commissioner is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 03-1728. Please show our docket number with any charge or credit to our Deposit Account.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By Cynthia A. Bonner
Cynthia A. Bonner
Reg. No. 44,548
626/795-9900

CAB/tt

TXT IRV1083817.1-*02/24/05 8:47 AM

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

VIOLA CORNUTA PLANT NAMED 'SUNVIOHO'

BOTANICAL/COMMERCIAL CLASSIFICATION

Viola cornuta/Viola Plant

VARIETAL DENOMINATION

5 cv. 'Sunvioho'

BACKGROUND OF THE VARIETY

The genus *Viola* is included in the family *Violaceae* and has about 500 species of annuals, biennials, evergreen, and semi - evergreen and deciduous perennials found in varied habitats in temperate regions worldwide.

10 Each flower has 5 petals: a spurred lower petal, 2 lateral petals and 2 upward-facing upper petals.

While many cultivars within the genus are informally referred to as garden pansies, violas are all derived from the complex hybridization of *V. tricolour*, *V. lutea*, *V. cornuta*, and other species.

15 *Viola cornuta* has played an important role in the development of garden violas and violettas as a result of cross breeding with the garden pansy *V. wittrockiana*.

Viola cornuta is stem prostrate, with leaves narrow to broad ovate, base cordate to truncate, and margin shallow-crenate.

20 The female parent used in the crossing of 'SUNVIOHO' was '9V-39a' (unpatented in the U.S.) which is our breeding line and grown at Omori-cho, Yokaichi-shi, Shiga-ken, Japan

The pollen parent used in the crossing of 'SUNVIOHO' was 'Alpine Sun', ~~whose seeds were bought from Daichi Seed Co., Ltd. (Japan)~~ (a cultivar
25 unpatented in the U.S.

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

BREEDING PROCESS

Crossing between '9V-39a' as female parent and 'Alpine Sun' as male parent was conducted at Omori-cho, Yokaichi-shi, Shiga-ken, Japan in April 2000. In May, seeds were obtained from the crossing and were sown and grown at the same location. In August, three seedlings were selected in view of having highly spreading habit with white petals from 20 seedlings obtained, and propagated by cutting. Those three seedlings were tested by flower potting and bedding from October 2001, at Omori-cho, Yokaichi-shi, Shiga-ken, Japan. Finally one variety was selected in view of having a long blooming time. The botanical characteristics of that plant were then examined, using similar variety 'Violetto Nive' (unpatented in the U.S.) and 'Alpine Summer' (unpatented in the U.S.) for comparison. As a result, it was concluded that this *Viola cornuta* plant is distinguishable from any other variety, whose existence is known to us, and uniform and stable in its characteristics. The new variety of *Viola cornuta* plant was named 'SUNVIOHO'.

Viola cornuta plants, 'Alpine Sun' and '9V-39a', are presently maintained at Omori-cho, Yokaichi-shi, Shiga-ken, Japan.

This new and distinct variety of *Viola cornuta* plant, 'SUNVIOHO', was asexually reproduced by tissue culture at the aforementioned the Omori-cho, Yokaichi-shi, Shiga-ken, Japan and the homogeneity and stability thereof were confirmed.

The new variety reproduces true to type in successive generations of asexual reproduction.

DESCRIPTION

In the following description, the color-coding is in accordance with the Horticultural Colour Chart of The Royal Horticultural Society, London, England (R.H.S. Colour Chart).

The botanical characteristics of the female parent plant '9V-39a' used in the crossing of 'SUNVIOHO' are as follows.

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 9 cm

5 Plant cover - Approximately 49 cm

Stem:

Length - Approximately 36 cm

Branching - Much

Pubescence - Present

10 **Leaf:**

Overall form - Narrow elliptic

Apex form - Acute

Base form - Acute

Margin - Slightly lobed

15 Length - Approximately 1.9 cm

Width - Approximately 1.2 cm

Color of upper surface - Grayish olive green (Near R.H.S. 137A)

Color of under surface - Moderate yellow green (Near R.H.S. 137C)

Variegation - Absent

20 Leaf luster - Lustrous

Vein - Distinct

Petiole length - Approximately 1.4 cm

Stipule length - Approximately 1.8 cm

Flower:

25 Peduncle length - Approximately 7.5 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (Near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Longitudinal diameter - Approximately 3.2 cm

Horizontal diameter - Approximately 3.0 cm

Ruffle of petal margin - Weakly ruffled

Petal curving - Very weak

5 Petal number - Single

Upper petal

Form - Round

Size - Approximately 1.6×1.6 cm

Petal color - Single-colored

10 Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Side petal

Form - Ovate

Size - Approximately 1.3×1.5 cm

15 Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Lower petal

Form - Cordate

20 Size - Approximately 1.9×1.9 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Eye color - Vivid reddish yellow (Near R.H.S. 14A)

25 Eye size - Medium

Thickness of petal - Medium

Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Seed:

Color - Deep brown

Physical property:

Flowering time - Late

5 Fragrance - Faint

Resistance

Rain - Strong

Cold - Strong

Heat - Medium

10 Disease - Strong

Pest - Strong

The botanical characteristics of the male parent plant 'Alpine Sun' used in the crossing of 'SUNVIOHO' are as follows.

Plant:

15 Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 8 cm

Plant cover - Approximately 35 cm

Stem:

20 Length - Approximately 25 cm

Branching - Much

Pubescence - Present

Leaf:

25 Overall form - Narrow elliptic

Apex form - Obtuse

Base form - Acute

Margin - Serrated or slightly lobed

Length - Approximately 2.1 cm

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Width - Approximately 1.0 cm

Color of upper surface - Grayish olive green (Near R.H.S. 137A)

Color of under surface - Moderate yellow green (Near R.H.S. 137C)

Variegation - Absent

5 Leaf luster - Matte

Vein - Apparent

Petiole length - Approximately 2.2 cm

Stipule length - Approximately 2.1 cm

Flower:

10 Peduncle length - Approximately 8.0 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (Near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

15 Longitudinal diameter - Approximately 3.3 cm

Horizontal diameter - Approximately 2.5 cm

Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

20 Upper petal

Form - Round

Size - Approximately 1.1×1.0 cm

Petal color - Single-colored

Ground color - Vivid yellow (Near R.H.S. 9B)

25 Blotch - Absent

Side petal

Form - Ovate

Size - Approximately 1.2×1.0 cm

Petal color - Single-colored

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Ground color - Vivid yellow (Near R.H.S. 9B)

Blotch - Absent

Lower petal

Form - Cordate

5 Size - Approximately 1.4×1.3 cm

Petal color - Single-colored

Ground color - Vivid yellow (Near R.H.S. 9A)

Blotch - Absent

Eye color - Vivid yellow (Near R.H.S. 13A)

10 Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

15 **Seed:**

Color - Deep brown

Physical property:

Flowering time - Late

Fragrance - Absent

20 **Resistance**

Rain - Medium

Cold - Strong

Heat - Medium

Disease - Strong

25 Pest - Strong

SUMMARY OF THE NEW VARIETY

The new variety of viola plant named 'SUNVIOHO', which is ~~the first a~~ vegetative propagated variety, has a spreading plant habit with very long epigeal stem. The plant height is low and the branching is abundant. The flowers of the

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

new variety are oblong and very small, and the color of flower is pale yellow green with vivid yellow eye. The new variety has a high resistance to cold, pests and diseases.

BRIEF DESCRIPTION OF THE DRAWING

5 FIG.1 is a photograph giving a partial view of the new variety of *Viola cornuta* plant 'SUNVIOHO' planted in pots.

FIG.2 is a photograph of flowers of the new variety of *Viola cornuta* plant 'SUNVIOHO'.

DESCRIPTION OF THE VARIETY

10 The botanical characteristics of this new and distinct variety of *Viola cornuta* plant named 'SUNVIOHO' are as follows.

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

15 Height - Approximately 10 cm

Plant cover - Approximately 90 cm

Stem:

Length - Approximately 50 cm

Branching - Very abundant branching

20 Pubescence - Present

Leaf:

Overall form - Narrow elliptic

Apex form - Obtuse

Base form - Acute

25 Margin - Slightly lobed

Length - Approximately 4.0 cm

Width - Approximately 2.0 cm

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Color of upper surface - Grayish olive green (Near R.H.S. 137A)

Color of under surface - Moderate yellow green (Near R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

5 Vein - Apparent

Petiole length - Approximately 4.0 cm

Stipule length - Approximately 1.5 cm

Flower:

Peduncle length - Approximately 12 cm

10 Peduncle thickness - Thin

Peduncle color - Strong yellow green (Near R.H.S. 144A)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.5 cm

15 Horizontal diameter - Approximately 2.8 cm

Ruffle of petal margin - Weakly ruffled

Petal curving - Weak

Number of petals per flower - Five (two upper petals, two side petals and one lower petal)

20 Time of flowering - Early November to June in Japan, except for Hokkaido

Lastingness of the individual bloom - Approximately 5-7 days

Upper petal

Form - Round

Size - Approximately 1.7×1.7 cm

25 Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

Side petal

Form - Ovate

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Size - Approximately 1.5x1.3 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

Blotch - Absent

5 Lower petal

Form - Cordate

Size - Approximately 1.5x1.8 cm

Petal color - Single-colored

Ground color - Pale yellow green (Near R.H.S. 157A)

10 Blotch - Absent

Eye color - Vivid yellow (Near R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

15 Sepal - Short

Number of flowers - Many

Seed:

Color - Deep brown

Reproductive Organs:

20 Stamen - Five stamens joined around the ovary. Two lower stamens spurred

Stamen length - Approximately 2.0 mm

Anther color - Near R.H.S. 9D (Yellow Group). Tip: near R.H.S. 166B
(Greyed-orange group)

Pollen color - Near R.H.S. 9D (Yellow group)

25 Pistil length - Approximately 4.5 mm.

Stigma shape - Ellipsoidal

Stigma length - Approximately 1.0 mm

Stigma color - Near R.H.S. 144B (Yellow-green group)

Style length - Approximately 1.0 mm

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

Style color - Near R.H.S. 144D (Yellow-green group)

Ovary color - Near R.H.S. 144C (Yellow-green group)

Physical property:

Flowering time - Early

5 Fragrance - Faint or weak

Resistance

Rain - Strong

This variety has survived temperatures of at least -7°C. The plant grows well at temperatures up to 25°C

10 Disease - Strong

Pest - Strong

This new variety of *Viola cornuta* plant 'SUNVIOHO' is most suitable for flower bedding and potting, hanging basket and ground cover.

COMPARISON WITH SIMILAR VARIETY

15 The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Violetto Nive' in following points,

1. The plant width of 'SUNVIOHO' is wider than that of 'Violetto Nive'.

2. 'SUNVIOHO' has narrow elliptic leaf while 'Violetto Nive' has lanceolate one.

20 3. The leaf color of upper surface of 'SUNVIOHO' is near R.H.S.137A while that of 'Violetto Nive' is near R.H.S.137B.

4. The longitudinal diameter of 'SUNVIOHO' is smaller than that of 'Violetto Nive'.

25 5. The side petal form of 'SUNVIOHO' is ovate while that of 'Violetto Nive' is round.

6. The flowering time of 'SUNVIOHO' is early while that of 'Violetto Nive' is intermediate.

The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

variety, 'Alpine Summer' in following points,

1. The plant width of 'SUNVIOHO' is wider than that of 'Alpine Summer'.
2. 'SUNVIOHO' has narrow elliptic leaf while 'Alpine Summer' has lanceolate one.
- 5 3. The flowering direction of 'SUNVIOHO' is upward while that of 'Alpine Summer' is horizontal.
4. The ruffle of petal margin of 'SUNVIOHO' is weakly ruffled while that of 'Alpine Summer' is flat.
- 10 5. 'SUNVIOHO' has single-colored flower while 'Alpine Summer' has multi-colored one.
6. The color of the upper petal of 'SUNVIOHO' is near R.H.S. 157A while that of 'Alpine Summer' is near R.H.S. 86B.
7. The color of the side petal of 'SUNVIOHO' is near R.H.S. 157A while that of 'Alpine Summer' is near R.H.S. 9B with near R.H.S 85B margin and near
15 R.H.S. 79A vein.
8. The color of lower petal of 'SUNVIOHO' is R.H.S. near 157A while that of 'Alpine Summer' is R.H.S. near 9B with near R.H.S. 79A vein.
9. The flowering time of 'SUNVIOHO' is early while that of 'Alpine Summer' is intermediate.

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

CLAIM

A new and distinct variety of *Viola comuta* plant named 'SUNVIOHO',
substantially as herein illustrated and described.

**Substitute Specification
(Marked up copy)**

50596/CAB/A400

ABSTRACT OF THE DISCLOSURE

Disclosed herein is new *Viola cornuta* plant named 'SUNVIOHO', which is the ~~first~~ a vegetative propagated variety that was developed by specific hybridization between '9V-39a' and 'Alpine Sun'. 'Sunvioho' has a spreading habit with very long stem. The plant height is low and the branching is abundant. Flowers are vertically oblong and very small. The color of flower is pale yellow green with vivid yellow eye. The plant has a high resistance to rain, cold, pests and diseases.